12 Cultural Determinism

If economics is "what economists do," as Jacob Viner once remarked, it is clear that the scope of economics has broadened considerably in recent decades. The renewed interest in the causes of wealth or poverty of nations has taken economists into strange fields as well as strange lands. Thus we find economists today writing about the relationship between ideology and entrepreneurial activity, the importance of literacy for "development-mindedness" and "technology-mindedness," the effect of family structure on economic motivation, the relationship of childhood training to personality traits and creativity, and the like. True, some sturdy institutionalists—such as Clarence Ayres and John Gambs—maintained a steadfast interest in such questions throughout recent decades, despite the jeers of "standard" economists, jeers in which the present writer joined.[1] Twenty years ago the majority of the economics profession tended to regard interdisciplinary social scientists as the "lunatic fringe." Today, however, no one questions the right of social scientists such as Everett Hagen, Bert Hoselitz, Arthur Lewis, and J. K. Galbraith to the label "economist"; cross-disciplinary inquiries show signs of becoming "standard economics." Moreover, practitioners of other social science disciplines are invading the field of economic development, such as psychologists James Abegglen and David McClelland, political scientist Karl Deutsch, sociologists Wilbert Moore and Daniel Lerner, anthropologists Richard Adams, Charles Erasmus, Clifford Geertz, and John Gillin. The borderlines between social sciences are becoming blurred today, just as yesterday the dividing lines

[1] Benjamin Higgins, *What Do Economists Know?* (Melbourne, 1950).

between natural sciences became increasingly indistinct. Interdisciplinary and cross-disciplinary effort is becoming the rule, and it is increasingly difficult to say where "economics" ends and other disciplines begin.[2]

The Scope of Economics

According to the classic definition of Lord Robbins, economics is "the study of human behaviour as a relationship between a multiplicity of ends and scarce means that have alternative uses." Even with a broad interpretation of this definition to include all aspects of allocation of scarce resources, whether or not the allocation takes place through an organized market and with the intermediation of money, economic analysis is still limited to operational questions of resource allocation.[3] If we limit economics in this fashion, will anything significant for economic development be overlooked?

Political Development

It is obvious that economic development will not take place in countries where the political power elite is resolutely opposed to it. Development requires not only entrepreneurship but an interplay of creative enterpreneurial activity and encouragement of such activity by the political power elite.[4] Nonetheless, it is important to put the political factor in its rightful place in the analysis of social change and economic development. Many people, especially in Latin America, reduce "social aspects of economic growth" to the concentration of political power in the hands of a relatively small and conservative elite group. Economic development is indeed difficult (although not completely impossible) where the country is ruled by a landed aristocracy with deeply embedded feudal attitudes, strongly

[2] Cf. Jose Medina Echavarria and Benjamin Higgins, *Social Aspects of Economic Development in Latin America*, Vol. II (Paris: UNESCO, 1963).

[3] Very few truly non-monetary societies exist, and the number of people living in them is an insignificant fraction of the population of developing areas. Sometimes societies seem more "non-monetary" than they really are because credit is more important than cash—as in advanced countries. There is, however, a question regarding the quantitative importance of the non-market sectors, as Cyril Belshaw has pointed out (*Traditional Exchange and Modern Markets*, Englewood Cliffs, N.J., 1965, chap. 1 and pp. 75–78 and 86). Where the non-market sector is important there is certainly no reason to exclude it from economic analysis. After all, the economics of barter and even "Crusoe" (self-sufficiency) economics have been in the literature for nearly a century. Anthropologist Ralph Linton maintains that "non-monetary economies" are quantitatively unimportant in the economic development problem. "Fortunately for any plans which we may have for encouraging economic growth, China, Southeast Asia, Islamic cultures of the Near East, India, and, often ignored, the high native civilizations of West Africa, are all thoroughly familiar with trade, credit, banking, and private property. In the Islamic countries in particular, one is struck by the resemblance of these patterns to those of medieval Europe. China also seems familiar to an American in these respects. India avowedly has a different value system from the rest, but anyone who has done business there will recognize that indifference to economic gains is largely limited to ascetics." Ralph Linton, "Cultural and Personality Factors Affecting Economic Growth," in David E. Novack and Robert Lekachman, *Development and Society, the Dynamics of Social Change* (New York, 1964), p. 196.

[4] Cf. Clifford Geertz, *Agricultural Involution in Java* (Berkeley, 1963), Foreword by Benjamin Higgins.

opposed to industrialization, mass education, and technological change. In such countries a prerequisite for successful economic development may be to "get the rascals out." The socio-cultural factors that will lead to the necessary changes in the political system are a subject of great interest. Here is one aspect of economic development, at least, which economists have not dared to tackle professionally. Even pure Marxist economics has no real recipe for fomenting revolution; rather, it predicts revolution as the inevitable outcome of subjugation of the masses. For the most part, economists lay no claim to professional expertise in the field of "getting the rascals out."

Moreover, it is clear that economic development, whether defined as rising per capita income or more broadly as rising levels of living, can occur within a wide range of political systems. Economists have largely abandoned the search for Utopia, the unique system with harmoniously integrated political, social, and economic institutions that would automatically guarantee an optimal economic situation, or a maximum rate of growth. Dictatorships, military regimes of various kinds, Soviet-style Communism with highly centralized decision-making, Yugoslav-style Communism with highly decentralized decision-making, various mixtures of public and private enterprise within parliamentary democracies—even, it would seem from prewar Japanese experience, an essentially feudal regime committed to industrialization—all are capable of producing high rates of economic growth.[5] The political elite, of course, is not always united in its attitudes toward economic and social development policy. Moreover, the socio-cultural framework influences the political process in at least two ways. It helps to determine who gets political power, and—perhaps even more important—it affects the views of those in power as to just what is feasible by way of economic and social reform. "Reform" governments that prove too timid to introduce truly effective reforms are all too familiar a phenomenon in developing countries.

There is, no doubt, some form of political organization that will provide the maximum rate of economic growth for each country at each point of time, given its economic situation and its socio-cultural framework. The determination of the optimal political system from the standpoint of economic growth is a fascinating and perhaps even an important exercise.[6] As stated in an UNESCO Report, "Political structures, like other social structures, can be subjected to dispassionate analysis." [7] But even if we had an impeccable political theory of economic development, we could not expect that political regimes of the wrong complexion would voluntarily retire from power if confronted with nothing stronger than inexorable logic.

[5] Cf. James C. Abegglen, *The Japanese Factory* (Glencoe, Ill., 1963); and "The Relationship Between Economic and Social Programming in Latin America," in *Social Aspects of Economic Development in Latin America*, Vol. I (Paris, 1963).

[6] See the chapters by Gino Germani and Florestan Fernandes in *Social Aspects of Economic Development in Latin America*, Vol. I (Paris: UNESCO, 1963).

[7] UNESCO, *Social Prerequisites to Economic Growth*, Report of an Expert Working Group (Kyrenia, Cyprus, April 17–26, 1963), p. 23. There is, of course, a difference between the politics of economic development and political development. For a discussion of the latter, see John D. Montgomery and William J. Siffin (eds.), *Approaches to Development: Politics, Administration and Change* (New York, 1966).

In the rest of this chapter we shall abstract from the purely political factor in economic development, not because the political factor is unimportant but because social scientists have little to say about it. In any case there are enough countries where the political power elite does want economic development to keep economists busy for some time to come. Clearcut successes in these countries will help to bring about political change in other countries where the dominant groups are opposed to the measures needed for raising levels of living.

Boeke and Socio-cultural Dualism

J. H. Boeke's [8] "dualistic theory" is of special interest and importance because of his experience as a Netherlands East Indies civil servant and his subsequent years of reflection as professor of Eastern economics at Leiden University. Although his theory was based largely on Indonesian experience, Boeke thought that it had general application. The reason for his choice of title for his last book, which was mainly an amalgamation of two earlier studies of the Indonesian economy was his [9]

> . . . conviction that the economic problems of Indonesia are typical for a large and important part of the world, that therefore an analysis of these problems may be illuminating for many similar countries and that the experience gained in several decades of economic colonial policy may serve as a guide to the host of inexperienced planners for the well-being of that part of the world that has not yet conformed to their western ideals.

An analysis based largely on Indonesian experience may prove to have less general application than Boeke believed; but as one of the few prewar attempts at a general theory of underdeveloped areas Boeke's theory enjoyed considerable vogue.[10]

The Theory

Dr. Boeke gives the following formal definition of a dual society: [11]

> Social dualism is the clashing of an imported social system with an indigenous social system of another style. Most frequently the imported social system is

[8] J. H. Boeke, *Economics and Economic Policy of Dual Societies* (New York, 1953), cited as Boeke, *Economics;* "Three Forms of Disintegration in Dual Societies," lecture given in the course on Cooperative Education of the International Labor Office, Asian Cooperative Field Mission, October, 1953, and published in *Indonesië*, Vol. VII, No. 4 (April, 1954), cited as Boeke, "Three Forms"; and "Western Influence on the Growth of Eastern Population," *Economia Internazionale*, Vol. VIII, No. 2 (May, 1914), cited as Boeke, "Western Influence."

[9] Boeke, *Economics*, p. vi.

[10] Also to the degree that Boeke reflected attitudes of the Netherlands East Indies government, his ideas are of considerable historical interest. For evidence that the whole structure of government in the Netherlands Indies rested on a theory of "dualism," see Rupert Emerson, *Malaysia* (New York, 1937), especially pp. 420–25.

[11] Boeke, *Economics*, p. 4.

high capitalism. But it may be socialism or communism just as well, or a blending of them.

This dualism, he says, is a "form of *disintegration*, [which] came into existence with the appearance of capitalism in pre-capitalistic countries." [12] The invading force is capitalism, but it is not colonialism. Colonialism is "a dust-bin term"; both it and "the antithesis native-foreign" are "objectionable," and [13]

> . . . it is to be hoped that with the obtaining of national sovereignty the true character of economic dualism will be acknowledged sincerely and logically, for its negation is decidedly not to the interest of the small man.

On the other hand, "dualistic" is for Boeke virtually synonymous with "Eastern." Dualism arises from a clash between East and West; Boeke quotes in this context Rudyard Kipling's famous phrase, "East is East and West is West and never the twain shall meet." Boeke contends that "we may use the term 'eastern economics' instead of 'dualistic' economics because both terms cover the same situation, to wit, the situation that is typical for the countries in South and East Asia." [14]

A dualistic economy has several characteristic features. One of these is "limited needs," in sharp contrast with the "unlimited needs" of a Western society. Accordingly,[15]

> . . . anyone expecting western reactions will meet with frequent surprises. When the price of coconut is high, the chances are that less of the commodities will be offered for sale; when wages are raised the manager of the estate risks that less work will be done; if three acres are enough to supply the needs of the household a cultivator will not till six; when rubber prices fall the owner of a grove may decide to tap more intensively, whereas high prices may mean that he leaves a larger or smaller portion of his tappable trees untapped.

In other words, the Eastern economy, in contrast to the Western, is characterized by backward-sloping supply curves of effort and risk-taking.

Such needs as there are in Eastern societies are social rather than economic. It is what the community thinks of commodities that gives them their value: [16]

> If the Madurese values his bull ten times as much as his cow, this is not because the former is ten times as useful to him in his business as the latter, but because the bull increases his prestige at the bull races.

A closely related feature, in Boeke's view, is the almost complete absence of profit seeking in an Eastern society. Speculative profits are attractive to the Oriental, but "these profits lack every element of that regularity and

[12] Boeke, "Three Forms," p. 282.
[13] Boeke, *Economics*, p. 20.
[14] *Ibid.*, p. 12.
[15] *Ibid.*, p. 40.
[16] *Ibid.*, pp. 37–38.

continuity which characterizes the idea of income." [17] Similarly, there is no professional trading in the Eastern village community. Eastern industry is characterized by "aversion to capital," in the sense of "conscious dislike of investing capital and of the risks attending this," only slight interest in finish and accuracy, lack of business qualities, failure to come up to even the minimum requirements of standard and sample, lack of elasticity of supply, lack of organization and of discipline and corrective local specialization. All this is said to be in sharp contrast to the industry of the Westernized, capitalistic sector of underdeveloped areas. The Oriental is, unfortunately, totally lacking in organizing power where modern Western enterprises are concerned. Where Western industry is dominated by common-sense reason, Eastern society is molded by "fatalism and resignation." [18]

Because of these great differences between Eastern and Western economies, Western economic theory is totally inapplicable to underdeveloped areas. "We shall do well," Boeke sternly admonishes, "not to try to transplant the tender, delicate hothouse plants of western theory to tropical soil, where an early death awaits them." [19] Western economic theory, he says, is based on unlimited wants, a money economy, and many-sided corporative organizations, none of which exists in Eastern societies. Western theory is designed to explain capitalistic society, whereas the Eastern village is precapitalistic. He is particularly critical of any effort to explain the allocation of resources or the distribution of income in terms of marginal productivity theory, mainly because of the great immobility of resources in an Eastern society.

Policy Implications

This picture of the nature of underdeveloped areas led Boeke to pessimistic views on policy. In general, his conclusion is that the kindest thing the Western world can do for underdeveloped areas is to leave them alone; any effort to develop them along Western lines can only hasten their retrogression and decay. Perhaps Boeke's strongest statement of this conclusion was his last one. We cannot reverse the process of social disintegration in dual societies, he said, "because it is not possible to transform the operating forces into the opposite of what they are. The contrast is too all-inclusive, it goes too deep. We shall have to accept dualism as an irretrievable fact." [20] The acceptance of social and economic dualism leads to two policy conclusions: "first that as a rule one policy for the whole country is not possible, and second that what is beneficial for one section of society may be harmful for the other." [21]

Even in agriculture, efforts to bring about improvement in methods are likely to cause retrogression instead, especially if "mental attitudes" of farmers are not changed in the process. The culture of the village com-

[17] *Ibid.*, p. 41.
[18] *Ibid.*, pp. 101–102, 106.
[19] *Ibid.*, p. 143.
[20] Boeke, "Three Forms," p. 289.
[21] *Ibid.*, p. 289.

munity, Boeke said is "perfectly adapted to the environment"; and the methods of Eastern agriculture "could hardly be improved upon." [22] The existing agricultural system is a result of adaptation and is not at a low stage of development.

Dr. Boeke doubted the ability of the Javanese cultivator to grow new crops. Nor did he think that Indonesians could [23]

> assume part of the work of the western enterprises, the agricultural part, so as to allow entrepreneurs to devote their energies exclusively to the industrial aspect of the business. This would mean that what is now one united concern, one business, what is being nursed and developed in serried areas, uniformly raised, scientifically guarded and improved, qualified on the basis of the knowledge of market requirements, promoted by means of cheap and plentiful capital, brought into immediate contact with industrial processing, would begin to disintegrate and retrogress at all these points. The present organization of these enterprises is the product of a long history, and handing over cultivation of these products to the petty native peasant would mean a return to an arrangement in the main abandoned as inefficient.

As for industry, "Eastern business will always present a very different appearance from western, even in cases where the two are concerned in the production of the same commodity." Technological progress along Western lines is impossible. "There is no question of the eastern producer adapting himself to the western example technologically, economically or socially." Indeed, if Eastern enterprises endeavor to imitate Western methods, they will merely lose their competitive qualities.[24]

Similarly, Boeke did not believe that there is anything government can do about the unemployment of underdeveloped areas. He distinguishes five kinds of unemployment: seasonal, casual, unemployment of regular laborers, unemployment of urban white-collar workers, and unemployment among Eurasians (he does not specifically mention disguised unemployment). All five kinds of unemployment, Boeke said, "are beyond the reach of government help," because dealing with them "would entail a financial burden far beyond the government's means." [25]

Economic development of any kind is hampered by limited wants. Either an increase in supply of foodstuffs, or industrialization, will lead to a glutting of markets, a fall in prices, and havoc. Even the transmigration program, on which the Indonesian government has placed so much hope for economic development, is worse than useless, according to Boeke. It only transplants Java's population problem to the Outer Islands, while Java itself is worse off than before.[26]

Any effort on the part of the West to improve these harassing conditions by training Indonesian leaders can only hasten decay: [27]

[22] Boeke, *Economics*, p. 31.
[23] *Ibid.*, pp. 193–94.
[24] *Ibid.*, p. 103.
[25] *Ibid.*, pp. 318–19.
[26] *Ibid.*, pp. 187, 182–83.
[27] *Ibid.*, p. 39.

> In my opinion, here the western influence tends to divert the attention of the leading classes from their own society to the new and promising western power. The masses, however, unable to follow their leaders on their western way, thus lose the dynamic developing element in their culture. Eastern culture in this way comes to a standstill, and stagnation means decline.

In the field of international relations as well, the outlook for the underdeveloped areas is dismal. For,[28]

> after the Second World War disintegrating forces have asserted themselves and binding forces have grown weaker in the international field as well. I am alluding to the formation of new sovereign nations and to the decline of the uniting influence of colonial and imperial powers on all the dual countries.

Boeke had little to suggest by way of positive policy, as a substitute for the "technical- and capital-assistance" approach which he deplores. However, his idea seems to be that any industrialization or agricultural improvement must be "a slow process," small-scale, and adapted to a "dualistic" framework.

> The conclusion to which these arguments about industrialization as well as about agricultural reforms lead us can be no other than the one already expressed, to wit, that social-economic dualism, far from being considered as a passing phase the termination of which may be hastened considerably by a western policy of integration, must be accepted as a permanent characteristic of a large number of important countries, permanent at least within a measurable distance of time. [We must have a] dichotomy of social-economic policy, which is fundamentally different according to the social groups at which it is aimed.[29]

What this policy means in concrete terms is not spelled out. "I will expose no plans," said Boeke, except to stress the need for "village restoration." This restoration will not take place through a revival of the rural gentry, but must "follow more democratic ways." New leaders must spring from "the small folk themselves," and must be accompanied by "a strong feeling of local social responsibility in the people themselves." Just how all this is to be accomplished Boeke did not say; but the sphere of action must be small, the time slow, and the goal won by "faith, charity, and patience, angelic patience." [30]

Appraisal of the Theory

As prologue to any critical appraisal of the Boeke theory, three things should be said. The first is that the late Professor Boeke was one of those devoted and highly trained Netherlands East Indies civil servants who went to Indonesia during the period of the "ethical policy," determined to help raise the standard of welfare of Indonesians. During the period

[28] Boeke, "Three Forms," p. 294.
[29] *Ibid.*, p. 293.
[30] Boeke, "Western Influence," pp. 366–69.

from 1900 to 1930, when the "ethical policy" was pursued, the Dutch had a scientific—even scholarly—approach to their colonial policy. N.E.I. civil servants arrived in Indonesia with a special degree in Oriental studies, speaking the Indonesian language and well-versed in Indonesian history and culture. In that period, a genuine, albeit limited, effort was made to improve the lot of Indonesians. The effort failed. There was even doubt as to whether the Javanese standard of living was not lower in 1930 than it had been two generations earlier. In 1940 the last of a series of Royal Commissions to look into the condition of the Indonesian people was appointed—the so-called Coolie Budget Commission. Boeke himself had cried out in despair,[31]

> But the only popular response to all these nostrums is an increase in numbers, while foreign capitalists and foreign energy take out of native hands a rapidly increasing share of native activities.

Thus Boeke's defeatism must be explained in large measure by the failure of the "ethical policy" in Indonesia. Undoubtedly, there is an element of "hen-and-egg" in the relationship between this failure and sociological dualism. For the dualistic theory did not spring full-blown from the head of Dr. Boeke: similar views can be found in the earlier Dutch literature, some of them lineal descendants of German theories about the "primitive and civilized mind." To some degree the theory of sociological dualism informed Dutch colonial practices, even under the "ethical policy." The conception of what was appropriate for Indonesians in the way of education, training, and industrialization was very limited; the "ethical policy" was far indeed from the contemporary concept of "the big push," discussed below. In the light of present-day theories of development, one might argue from the strength of hindsight that the "ethical policy" was foredoomed to failure. Be all that as it may, it remains true that the Boeke theory must be explained partly in terms of Indonesian history during Boeke's lifetime.

The second point is that there can be no question about the phenomenon of dualism; it is one of the distinguishing features of underdeveloped countries. Virtually all of them have two clearly differentiated sectors: one confined mainly to peasant agriculture and handicrafts or very small industry, and the trading activities associated with them; the other consisting of plantations, mines, petroleum fields and refineries, large-scale industries, and the transport and trading activities associated with these operations. Levels of technique, productivity, and income are low in the first sector and high in the second. Overcoming this dualism is a major task of economic development policy.

However, it is our view that Boeke looked in the wrong place for his *explanation* of dualism. He thought it had to do with the nature of the society, if not actually of the people themselves. As we will see below, dualism is more readily explained in economic and technological terms;

[31] Boeke, "Het Zakelijke en het Persoonlijke Element in de Koloniale Welvaartspolitiek," *Koloniale Studien*, April, 1927.

and this explanation withstands scrutiny better than Boeke's sociological explanation. It is well that such is the case; for if Boeke were right, all our efforts to produce a take-off into sustained growth in underdeveloped countries through vigorous development programs supported by technical and capital assistance from the West would be in vain.

The third point is that Boeke did not speak for Dutch scholars as a group. On the contrary, some Dutch social scientists, including some of Boeke's own students, were severely critical of Boeke's theories. Indeed, most of the criticisms made by the present writer have been made in the Dutch literature by one social scientist or another.[32]

The Facts

In examining this gloomy analysis of the prospects for underdeveloped areas, let us first consider Boeke's presentation of the facts regarding Eastern society.

Let us begin with his argument about "limited wants" and backward-sloping supply curves of effort and risk-taking. There is an all-important difference between saying that the people of underdeveloped countries really cannot envisage a standard of living higher than their own, or that they could think of no satisfactory way of spending increases in income, and saying that they see no simple way of raising their standard of living by their own efforts or enterprise. The last of these statements is to some extent true, and the reasons for it receive attention below. The first two are definitely not true. In most Asian countries, both the marginal propensity to consume and the marginal propensity to import are high. Wants of the villagers, far from being limited, are so many and varied that any "windfall," occurring initially through increased exports, is quickly spent on imported semiluxuries unless vigorous import and exchange controls are applied to prevent it. Far up the great rivers of Kalimantan (Borneo), hundreds of miles into the jungle, good rubber prices result in a spate of orders for bicycles, mattresses, watches, fountain pens, and the like. *Sampans* in the remotest canals are loaded with Australian tinned milk and American tinned soup. The same is true of the Outer Islands as well. Indeed, the limitless wants of the Indonesian people confront the authorities concerned with import and foreign exchange controls with their major problem. To turn these wants into a wellspring of economic growth, the people must be shown the connection between satisfaction of their wants and their own willingness to work, save, and take risks—a difficult but not impossible task.[33]

Considering the growing number of enterprises efficiently organized and operated by Orientals, along Western lines, it is difficult to share Boeke's pessimism regarding possibilities of technological progress in

[32] See for example the collection of essays in A. van Marle (ed.), *Indonesian Economics: The Concept of Dualism in Theory and Policy* (The Hague, 1961).

[33] This point is made, in different terms, by Professor D. H. Burger, "Boeke's Dualisme," *Indonesië*, Vol. VII, No. 3 (January, 1954). See also chap. IX, "Technical Assistance to Underdeveloped Areas," in Lyle W. Shannon, *Underdeveloped Areas* (New York, 1957).

Eastern industry. Boeke's characterization of Oriental casual labor as "unorganized, passive, silent, casual" would be acceptable to very few of the employers in Asia who have to deal with contemporary trade unions, especially those where communist influence is strongest.[34] Similarly, it is hard to reconcile Boeke's isolation of "repugnance to alienation from the village community" with the continued growth of the large cities in Asia. Urban life of the larger cities, with its cinemas, cafés, shops, libraries, and sports events, has proved attractive to villagers who get a taste of it; the result is congestion, inadequate community facilities, and unemployment in the larger cities. It is also hard to reconcile Boeke's insistence on the inefficiency of native agriculture, as compared with Western agriculture, with the postwar growth of smallholders' exports, in Indonesia, Malaya, Nigeria, and elsewhere.

Again, Boeke's insistence on the difficulty of persuading Javanese people to leave their villages, in order to move to the Outer Islands, is contradicted by the files of the Department of Transmigration in Indonesia which hold two million applications for removal under the transmigration scheme.

At times, Boeke's "facts" seem to conflict with each other. For example, at one point he emphasizes the immobility of labor; [35] at another, he states that wages cannot be raised by industrialization, because [36]

> . . . as soon as, for instance, a new mill is opened or an irrigation work is constructed, from all sides wage laborers, colonists, traders, and partisans rush in, if need be from hundreds of miles away, to seize this opportunity to supplement their scanty means of living.

The latter of these two contrasting pictures conforms more closely to the results of field studies conducted by the M.I.T. Indonesia Project.[37] Plantation owners often complained of the difficulty of maintaining a labor force, in the light of an infinitesimal increase in wage rates on neighboring plantations or in neighboring factories. The drain of trained Chinese workers from the bauxite and tin mines, in response to more attractive wage offers from Red China, became a major problem during the 1950's. Again, at one point Boeke explained the impossibility of significant expansion of smallholder agriculture.[38] Yet earlier, he complained of the N.E.I. government's difficulty in forcing smallholders to grow less rubber

[34] Boeke, *Economics*, pp. 144, 145. At one point, Boeke seems even to deny the possibiltiy of growth of labor organizations. Because of the nature of agricultural enterprises, which are scattered and more likely to support each other in their common interests than to compete, every effort at organization could be nullified, Boeke argues. The fact is, however, that it is precisely in plantation agriculture that the Indonesian trade-union movement is strongest.

[35] Boeke, *Economics*, pp. 143–45.

[36] *Ibid.*, p. 177.

[37] C. Geertz, *Modjokuto: Religions in Java*, February, 1958; H. Geertz, *Modjokuto: Town and Village Life in Java*, 1957; A. Dewey, *Modjokuto: The Market*, August, 1957; M.I.T., CIS (mimeographed).

[38] Boeke, *Economics*, pp. 214–16.

during the 1930's; imposition of what amounted to "penal" export duties resulted instead in an increase in productivity of native smallholders.[39] This experience seems to suggest that expansion of smallholders' agriculture is a matter of finding the right incentive system.

The observations of other economists who have enjoyed the opportunity for studying economic behavior in underdeveloped countries for themselves confirm the view that economic incentives are at least as powerful there as in advanced countries. Thus Arthur Lewis, speaking of the assumption made by colonizers in Africa that "wants were limited" and that accordingly compulsion would be necessary to obtain an adequate supply of labor, says: [40]

> These compulsions (except slavery) are still to be found in one or the other of the African colonies of all the European powers, but they are not so necessary now as they were formerly thought to be. For imitation has done its work. The Africans have acquired new wants, and are willing to work to satisfy them without compulsion.

Regarding the degree to which people of underdeveloped countries are aware of opportunities for making profits and willing to seize them, he writes: [41]

> It is . . . hard to get the farmers in tropical countries to work as many hours as industrial workers in temperate countries, but this does not prevent them from seizing opportunities to use better seeds, or fertilizers, or to plant more profitable crops. It has not prevented the Gold Coast farmer—who is said, no doubt erroneously, to be one of the laziest farmers in the world—from switching from subsistence production to creating the largest cocoa industry in the world, over a short space of time; or prevented the farmers of Uganda or of Indonesia from taking enthusiastically to cotton and to rubber respectively.

Similarly, Peter Bauer speaks of the "great readiness to migrate, especially to the rubber and tea estates in Malaya and Ceylon," and "their prompt reaction to changes in economic conditions." "There is available a great volume of evidence [which] illustrates prompt and sensitive responses to small differences in prices." Even something so "deeply rooted in tribal custom as bride prices" varies appreciably with economic conditions.[42]

Similarly, Bauer and Yamey deny that the wants of peasants are fixed or static [43] and present many examples of economic responsiveness. "Observation of behavior in many different parts of the underdeveloped world suggests strongly that most producers are aware of current opportunities open to them, and are also anxious to use the information that they seek

[39] *Ibid.*, pp. 124–26.

[40] Arthur Lewis, *The Theory of Economic Growth* (London, 1955), p. 39.

[41] *Ibid.*, p. 41.

[42] P. T. Bauer, *Economic Analysis and Policy in Underdeveloped Countries* (Durham, N.C., 1957), pp. 21–24.

[43] P. T. Bauer, and B. S. Yamey, *The Economics of Underdeveloped Countries* (London and Cambridge, 1957), pp. 86–93.

out or is conveyed to them." In Cyprus "even comparatively small changes in price ratios bring about large changes in the conversion and disposal of produce." "The ready response of many East African cotton growers to price differences was recognized in an unusual context by an official commission of inquiry into the Uganda cotton growing industry in 1948. . . . It is well known that Africans in various territories are keen and discriminating buyers even though many of them are illiterate. Nor is entrepreneurship lacking in underdeveloped countries." They quote Professor Tax to the effect that "the Indian is perhaps above all else an entrepreneur, a businessman, always looking for new means of turning a penny." Bauer and Yamey are even doubtful as to whether the technological differences are as great as sometimes supposed. The technique which is most efficient in advanced countries is—unfortunately—likely to be most efficient in underdeveloped countries as well, because the more mechanized techniques are not only labor saving but also capital saving.[44]

Is "Dualism" an Eastern Phenomenon?

Some degree of "dualism" certainly exists in underdeveloped areas. Is dualism a special feature of Eastern countries? Merely to raise the question is to answer it. Boeke himself suggests at one point that dualism exists in other underdeveloped areas, including those of Latin America and Africa, as well as those of the Orient. But there is perhaps no country in which "dualism" is more striking than in Italy, with its industrialized and progressive north, and its agricultural and stagnant south. Indeed, one could go further, and argue that some degree of dualism exists in virtually every economy. Even the most advanced countries, such as Canada and the United States, have areas in which techniques lag behind those of the most advanced sectors, and in which standards of economic and social welfare are correspondingly low. Notable examples are the rural sections of the Province of Quebec, rural areas in the Southern hills and northern New England hills, and Mexican communities in Texas, Arizona, and New Mexico. Most economies can be divided into distinct regions, with different degrees of technological advance.

Many of the specific characteristics of the "Eastern" society described by Boeke seem to the present writer to be attributable to Western societies as well. The preference for speculative profits over long-term investment in productive enterprise appears wherever chronic inflation exists or threatens. Such attitudes prevail in Greece today as they did in Germany, France, Austria, and Italy after World War I. And surely the "conscious dislike of investing capital and of the risk attending this" prevails everywhere. A famous American financier has said, "nothing is so shy as a million dollars"; Western economists have recently developed a whole field of analysis relating to "liquidity-preference" and "safety-preference" to take account of the reluctance of investors the world over to accept risk or illiquidity, and their strong preference for keeping their capital in safe and liquid form. Only the prospect of large and fairly safe profits has

[44] *Ibid.*, pp. 105, 123.

called forth the large volume of investment that has resulted in the rapid development of the now advanced countries. Growth breeds growth, stagnation breeds stagnation, in any economy. As for valuing goods according to prestige conferred, rather than direct use-value, what Western society is free from such behavior? Veblen made such behavior a vital aspect of his analysis of American society, and gave it his famous label, "conspicuous consumption."

Similarly, Boeke's distinction between Eastern societies, especially Indonesia, where "export is the great objective," and Western countries, where export "is only the means which makes import possible"—a distinction which Boeke regards of "essential importance"—is hard to understand in view of the popularity of protectionist policies in most countries in recent decades. It is true, of course, that Dutch colonial policy was directed toward expanding exports, and was not much concerned with increasing imports for Indonesians. British policy in India, on the other hand, was very much concerned with expanding imports of British manufactures.

Dr. Boeke also speaks of absenteeism of regular laborers as "undoubtedly in part an expression of the very general pre-capitalistic phenomenon of desiring a large number of holidays." But employers in the United States or Canada in the early part of World War II, or in Australia since the war, would be quick to deny that absenteeism is no problem in the capitalist world. The same is true of the "backward-sloping supply curve of effort," which was all too evident in Australia during the immediate postwar period, and which began to appear at that time in certain industries, such as coal mining, even in the United States. It is the present writer's contention that this "backward-sloping supply curve" is not exclusively a feature of Eastern societies, but appears in any society which stagnates (or slows down) long enough to weaken the "demonstration effect," provided by people moving from one standard of living to another, as a result of their own extra effort, directed specifically toward earning additional income.[45]

[45] The truth may well be that, in a static world, supply curves of effort and risk-taking are normally backward sloping. Where no other changes are taking place, most people would probably like some additional leisure, or some additional safety and liquidity, when rates of pay for effort and risk-taking are increased, so that the extra leisure, safety, and liquidity can be had without a reduction in material standard of living. Can anyone doubt that most academicians would offer fewer man-hours for sale each year if basic university salaries were doubled and nothing else changed? The assumption of more and more outside work by members of university faculties really represents a movement along the backward-sloping portions of their supply curves in response to a cut in real wage rates through inflation. In dynamic societies the *illusion* of upward-sloping supply curves has been created by continuous *shifts* to the right of both demand curves and supply curves, in response to population growth, resource discoveries, and technological progress, as illustrated in Figure 12-1. The increase in demand prices has been *accompanied* by increases in supply; but if the increased demand prices had been offered with all other things remaining unchanged, the result would probably have been a contraction of supply.

For a discussion of response of labor to various incentives in various underdeveloped countries, with special reference to Mexico, see Wilbert E. Moore, *Industrialization*

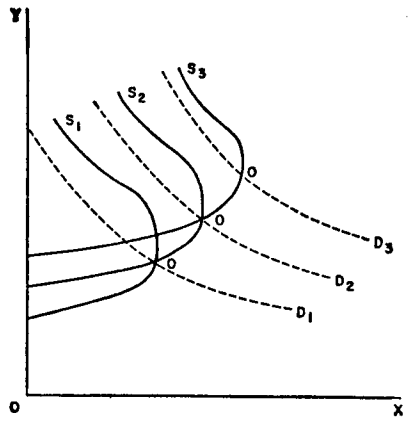

Figure 12-1

Again, Boeke's contrast between colonization in the Western world, where "people on their own initiative and at their own cost leave their country for abroad to better their living conditions" and Eastern migration policy which "means propagating migration from overcrowded regions with financial help from the government" seems to overlook the very large role that private and public assistance played in the migration from Europe to the New World. Dr. Boeke also remarked that in Indonesia "when recruiting new colonists, the attraction exerted by the large, well-known colonies was needed, where relations and friends from the village awaited the newcomer." Surely immigrants always needed some pressures at home to make them move, and surely migrants always preferred to move to places where they could join their own kin; hence the concentration of Scandinavians and Germans in the states of Wisconsin and Minnesota, and of Dutchmen in New York. Also, internal migration in Western countries as well as Eastern may require active government intervention. Consider, for example, the efforts of the British government to relocate industry, of the Australian government to decentralize industry, and the endeavors of the Quebec government to colonize its northern territories.

Similarly, Boeke's contrast between urban growth in Western and in Eastern societies does not ring true in the ears of the present writer. In dual societies, Boeke contends, urban development proceeds at the cost of rural life. In East and West alike, so far as one can judge from available data, urbanization is accompanied by an absolute growth, but relative

and Labor (Ithaca, N.Y., 1951). In the Mexican villages where intensive field work was carried out, Moore found that there was less resistance to a move from peasant agriculture to factory work in the more purely agricultural and isolated villages than in semisuburban villages with easier access to the city.

decline, in the rural population; although in countries where the birth rate has not fallen, the relative fall in rural population and income may not stick. If Boeke means that urbanization has yet to bring true economic progress in Eastern countries, he is, of course, right; but that is because urbanization in the East has not brought the same degree of industrialization, nor the same decline in birth rates. In short, "urban growth" has not been "urban development."

Is Western Social Theory Applicable to Underdeveloped Areas?

If dualism is not primarily the product of a clash of two irreconcilable cultures, its existence is not in itself a barrier to application of Western social theory to underdeveloped areas. Sectoral differences are a challenge to economic theorists, but one that can be met.

The question of usefulness of Western theory is an important one; clearly, the possibility of effective prescriptions for economic and social policy in underdeveloped areas by Western social scientists depends on the degree to which the tools of analysis, in the use of which the Western social scientist is an expert, can be applied in underdeveloped countries.

When Boeke spoke of "the tender, delicate hothouse plants of western theory" he seems to have had in mind the neoclassical theory of a generation ago. All his examples of "inapplicability" of Western theory refer to conflicts between his observations and simple neoclassical theory of value and distribution, with pure competition and "normal" schedules. He referred to no non-Dutch economist more recent than Schumpeter, and even in Schumpeter's case his references were to his theory of economic development, which first appeared before World War I. Most economists would contend that the economic theory of Alfred Marshall was only limited applicability in the Western world as well; and the inability to derive policy conclusions for underdeveloped areas on the basis of neoclassical theory alone hardly constitutes a proof that contemporary Western economic theory is useless in the East.

In order to demonstrate that Western theory is not so handicapped in explaining phenomena in dualistic economies as Boeke suggested, let us examine two of his examples. Marginal productivity theory, Boeke contended, provides no explanation of differences in rents charged for land leased to Westerners in Indonesia: Instead, the rent depends on "the scarcity of money in the region concerned." [46]

This case is not unfamiliar in orthodox Western economic analysis. There is not free competition for land in Indonesia and more than one product is involved in estimating the value of marginal product. It is, indeed, a case of monopsony plus joint production, not the simplest model, but one which exists in the Western world and one which can be analyzed with familiar tools. Moreover, there is nothing peculiarly "Eastern" about dependence of rents on "the landowner's need of money." *Supply* price will always depend on "the scarcity of money," as well as on the relative scarcity of the resource in question; it is only the demand

[46] Boeke, *Economics*, pp. 133–36.

schedule that is determined by value of marginal product. If, on the other hand, Boeke argued that rents paid by Western enterprise depend *solely* on the amount of money in the hands of native landowners, as some of his statements suggest, he takes us beyond the limits of credibility. Is the demand for land really infinitely elastic? Is the demand price for land really *totally* unrelated to the income that can be earned from it? At another point [47] he suggests that it is the amount of money in the hands of buyers that determines price of land. Clearly, the demand price for land will depend on how much money buyers have, in the West or in the East; there is no inconsistency with Western theory in that.

Let us next examine Boeke's argument that wage differentials cannot be explained in terms of Western marginal productivity theory. First, Dr. Boeke stated, the profitableness of various forms of culture varies so much that it is impossible to generalize about "the marginal productivity of native agriculture." Moreover, he argued, "marginal productivity presupposes the existence of a real labor market, that is to say mobility of labor. None of these is to be found in native agriculture: the vessels do not communicate, the liquid is thick and slow moving." [48] As we have already indicated, Dr. Boeke himself provided some evidence that *landless* labor is actually highly mobile; all landowners, working their own land, are highly immobile in the Western world as well. In any case, use of the concept of marginal productivity as one aspect of wage analysis is not precluded because of immobility. Even Marshall recognized the existence of "noncompeting groups," among which marginal productivity need not be equalized. Finally, Boeke asks, "How can we make the theory of marginal productivity accord with the phenomenon of wages for the same kind of work varying so greatly at the same time of the year in neighboring localities?" Clearly, the application of marginal productivity theory does not require that wages should be equalized throughout an economy. Immobility of labor, both geographic and occupational, is a common phenomenon everywhere. Indeed, it may be questioned whether occupational mobility is not greater in underdeveloped areas, where trade unionism is thus far less widespread, than it is in the advanced countries. Moreover, contemporary Western economic theory does not contend that wages must equal marginal productivity of labor. It recognizes a host of market situations, with relative degrees of monopoly and monopsony power, on the part of labor and of employers, and with wages varying from marginal productivity accordingly.[49]

Finally, the theory underlying monetary and fiscal policy—is a very

[47] *Ibid.*, p. 133.

[48] Boeke, *Economics*, pp. 142–43.

[49] Cf. John T. Dunlop and Benjamin Higgins, "Bargaining Power and Market Structures," *Journal of Political Economy*, February, 1942. For evidence that Western economists no longer stress "marginal productivity" in the effort to explain the wage structures of the real world, see Lloyd G. Reynolds, *The Structure of Labor Markets* (New York, 1951); and John T. Dunlop, *Wage Determination under Trade Unions* (New York, 1944). Lest some reader fear that such analysis would not apply where there is no *organized* labor market, let me hasten to add that a "market" in this sense exists wherever there is a wage, in money or in kind—even for the self-employed.

useful tool indeed when formulating such policies for underdeveloped areas. Perhaps, since the monetary and fiscal institutions are largely (though not wholly) Western, Boeke would not disagree on this point.

The Achieving Society

One of the few psychologists who has devoted himself to problems of economic development is David C. McClelland of Harvard. His book, *The Achieving Society*, is concerned with interactions among social organization, individual behavior, and economic development. "In its most general terms," he says, "the hypothesis states that a society with a generally high level of *n*-achievement will produce more energetic entrepreneurs who, in turn, produce more rapid economic development." [50] The book tries "to isolate certain psychological factors and to demonstrate rigorously by quantitative scientific methods that these factors are *generally* important in economic development." [51] He admits that "the psychologist has been of little help to date" in the understanding of economic development, but he feels that recent improvements in techniques for measuring motivation permit the application of psychology to "a problem of real interest to economists and sociologists." [52]

The Concept of *n*-Achievement

To begin with, says Professor McClelland, we must gain some understanding of what is meant by "achievement motivation." Because the concept is technical, we may let McClelland speak for himself:

> The "achievement motive" is ordinarily measured by performing a "content analysis" on imaginative thought. The scoring criteria for the "content analysis" were derived by comparing the thought processes of people under the influence of achievement motivation with the thought processes of people not under its influence. "Thought processes" were sampled by asking subjects to write imaginative stories to pictures. It was found that they introduced more ideas of a certain kind into their stories when their motivation to achieve—to do well—was aroused than when it was not aroused. An objective coding definition has been worked out for detecting these "ideas" with high agreement among different observers. Nearly all of the "ideas" can be classified under the heading of "desiring to do well" or "competing with a standard of excellence." This then became the scoring definition for a variable which was named technically *n*-achievement to distinguish it from other common-sense measures of achievement motivation such as one would get from how well a person said he was trying. The *n*-achievement score for an individual is simply a sum of the number of instances of achievement "ideas" or images and their subtypes, and the score for a group of individuals is some measure of central tendency (the average, the mode) of the scores of individuals who make up the group. In this way it can be determined, for example, that the average *n*-achievement of a group of teen-age German boys is slightly but significantly lower than the

[50] David C. McClelland, *The Achieving Society* (Princeton, N.J., 1962), p. 205.

[51] *Ibid.*, p. ix.

[52] *Ibid.*, pp. 18–19.

average *n*-achievement of a carefully matched group of American boys, or that American boys from lower class backgrounds have lower average *n*-achievement than boys from middle class backgrounds.

McClelland goes on to say that by now psychologists know a good deal about the characteristics of people with high *n*-achievement. They work harder at laboratory tasks, learn faster, do better work in high school than others with the same IQ, and "seem to do their best work when it counts for their record and not when other special incentives are introduced such as pressure from the outside to do well, money prizes, or time off from work." They are more resistant to social pressure, choose experts rather than friends as partners in their work activities, and like risky occupations, performing better under longer odds, and choosing moderate risks over either safe or speculative ones. Finally—and perhaps most important in terms of social policy—they come from "families in which there has been stress on early self-reliance and mastery."

The Method

Professor McClelland is critical of the "armchair theorizing" of economists, and considers it a great merit of his own methodology that it is "rigorously empirical." As indicated above, McClelland began by testing college students in the United States, using thematic apperception tests (TAT) in which the subjects were shown pictures and asked to tell stories based on them. In making comparisons of some countries with others and in following the course of *n-ach* (the abbreviation *n-ach* is sometimes used for *n*-achievement) through long periods of time, this direct approach to individuals could not always be used. As a consequence, McClelland writes: [53]

> Three general types of research have been carried out: the first deals with *group* measures of *n*-achievement and other psychological variables in relation to over-all rates of economic development, the second, with *individual* measures of motives, interest, values and performances of both mothers and sons in various countries, the third with the motives and other behaviors of actual business entrepreneurs.

Where the TAT could not be used, other "imaginative products" such as folk tales or stories in primary-school readers were taken "as rough indexes of the level of *n*-achievement and other variables in the country."

Folk tales were used to measure *n-ach* in a number of preliterate Indian cultures, and the levels of *n-ach* were then compared with the number of full-time entrepreneurs in the society. A "significant relationship" was found; in the 22 high-*n-ach* cultures, 74 per cent of them had at least some full-time entrepreneurs, whereas only 35 per cent of the 21 low-*n-ach* cultures had full-time entrepreneurs. Also 58 per cent of the high-*n-ach* cultures had above-median technology, and only 45 per cent of the low-*n-ach* cultures had above-median technology.

To compare levels of *n-ach* among contemporary nations, an effort was

[53] *Ibid.*, p. 57.

made "to collect twenty-one stories for each of two time periods (around 1925 and around 1950) from all of the nations in the world." However, the team was able to find satisfactory sets of stories in the school books of only twenty-three countries for the early period 1920–29, and for forty countries in the later period (1946–55). The stories from each country appeared to be consistently high or low in *n*-achievement.

To test the validity of this measure, the ranks obtained by scoring stories in school readers were compared with those obtained by direct testing of individuals for a smaller number of countries. Here inconsistencies appeared. For example, scores for India and the Lebanon were identical for the readers, but Indian students at the University of Madras scored significantly higher than Lebanese students at the University of Beirut. The inconsistencies, concludes McClelland, "raised some interesting questions as to just what the readers are measuring." Nothing daunted, however, McClelland pressed on with his study; for, he said, the proof of the pudding is in the eating. The question is, "Do they enable us to predict which countries will develop more rapidly economically?" By "predict" he means discover a significant correlation in the past.

Here is one example of what McClelland seems to mean by "rigorous empirical method." Awkward results are ignored, and only convenient ones retained. If the two measures of *n-ach* fail to fit each other, while both correlate with "economic development," either one measure must be abandoned, or else there are two, and not one, kinds of motivation that may lead to or cause economic development. The argument here comes uncomfortably close to saying, "We don't know what is measured by scoring school readers by our methods, but if the thing so measured correlates with economic development, we will call it *n*-achievement and argue that high levels of *n*-achievement cause high rates of economic growth."

Despite McClelland's claims to "rigorous empiricism" it would seem that a good deal of personal judgment goes into the evaluation of stories: [54]

> The code for *n*-achievement includes a number of subcategories which are summed to get an over-all score. It is first decided whether a story contains any achievement imagery ("concern with a standard of excellence") and then, if it does, whether it also contains additional ideas connected with the achievement sequence, such as a stated wish to succeed, obstacles to achievement, or means of gaining an achievement goal.

Measuring Development

McClelland expresses some misgivings about using figures of per capita income to compare levels of economic development, and expresses his preference for electric power produced as an alternative. This figure, he argues, comes closer to a measure of technological progress, which is the core of development, and permits the use of the same simple unit—kilowatt hours—for all countries. He recognizes the need to correct for basic

[54] *Ibid.*, p. 103.

power resources in the form of coal reserves and usable water power per capita, but does not do so. He does retain Colin Clark's "International units" of national income per capita as an independent measure of development. The electricity production figures give some curious results—for example, Canada was twice as "developed" as the United States in 1929, and advanced much more between 1929 and 1950. McClelland does not seem to be well acquainted with the literature and techniques of national accounting; he might be less confident of the superiority of any single production figure over the measurement of total productivity as an index of technological progress if he were. However, for large numbers of countries, electricity production per capita correlates highly with per capita income in any case, and little harm is done by using both figures together.

To measure the relative amount of development over the period 1925–50 McClelland does not take the actual figures for electricity production (or national income per capita in International units) but deviations from "expected" growth as determined by a regression line relating growth to initial level of electricity production or income per capita. This complication is introduced, apparently, because absolute amounts cannot be used (obviously the United States is likely to have a bigger absolute increase in per capita electricity production than Mexico) and because McClelland distrusts percentages. The lower the base the easier it is to achieve a given percentage increase.

It is not clear, however, that McClelland has thought through the implications of his alternative measure. Maintaining above-average growth may be much more difficult for a country that is already advanced than for one that is below average in the initial year. It is not just a question of arithmetic, but of the differences in the "technological lag" and in the opportunities for overcoming it. In fact, McClelland recognizes that countries like Canada and Norway could not have been expected to maintain their high growth of electricity production because of "saturation"; he adjusts the regression weights accordingly. But once started on such adjustments, why stop there? Why not adjust for other factors likely to make a difference in growth rates? Is there not some "armchair theorizing" behind this manipulation of the data?

McClelland concludes from his results that "the readers do not appear to have been such a poor method of estimating *n*-achievement level in 1925 after all"; that is, he finds a significant correlation between his measures of *n-ach* and his measure of development; 75 per cent of the above-average, *n-ach* countries were "overachievers" in electricity production, whereas only 25 per cent of the below-average-*n-ach* countries were "overachievers." Note again the methodological implications of this statement: It says in effect that anything correlating significantly with economic development is acceptable as a measure of *n*-achievement. Methodologically this statement means that Professor McClelland has decided *in advance* that *n*-achievement is the cause of (or at least is closely associated with) economic development. Thus the rate of economic development itself becomes a measure of the level of *n*-achievement in the

preceding period, meaning by *n*-achievement here anything that correlates significantly (not necessarily highly) with economic development—i.e., with expansion of electricity production. The dangers in this approach are obvious. Other variables—copper consumption, say—might correlate more highly with electricity production than McClelland's school-reader *n-ach*. Does that mean we must encourage copper consumption to assure economic growth? Unless McClelland can establish a clear-cut measure of *n*-achievement that can be used for international comparisons, the validity of which can be tested independently of economic growth itself, and then establish a logical connection (as well as an empirical one) between *n-ach* and development and show that this variable is more closely associated with economic development than other variables, which have a clear causal relationship with development, McClelland's basic hypothesis must be regarded as "not proven."

McClelland, however, seems pleased with his results: [65]

> In conclusion, if we look back over the diverse findings reported in this chapter, they confirm our general hypothesis to a surprising extent, considering the many sources of error that could affect our measures. A concern for achievement as expressed in imaginative literature—folk tales and stories for children—is associated in modern times with a more rapid rate of economic development.

Achieving Societies in the Past

Turning to ancient Greece, McClelland was of course unable to find school readers, but his concept of empirical research seems to be very broad. He used plays and poetry instead. Measuring economic development in ancient Greece also presents problems; data on electricity production are naturally scant, and Colin Clark has not got round to measuring income in International units for the pre-Christian period. McClelland therefore measures development in terms of millions of square miles of trading area. He then compares *n*-achievement with development thus defined and concludes, "The hypothesis is confirmed: a high level of achievement motivation precedes economic growth, a lower level of achievement motivation precedes economic decline."

But what is confirmed? Quite apart from the *post hoc ergo propter hoc* fallacy involved in McClelland's conclusion, what his data actually show is that in ancient Greece *n-ach* as he measures it declined continuously from 700 to 200 B.C., rapidly for the first three centuries and less rapidly for the next two. Economic development as measured, however, continued very rapidly from 600 to 400 B.C., and then fell off sharply. In short, economic development continued at a fast pace for 250 years after *n*-achievement started to fall rapidly, and declined only after *n*-achievement began falling less rapidly. What exactly is the causal connection supposed to be? What sort of lag between a change in the level of *n*-achievement and the rate of development is to be expected? Factors that require 250 years to be effective are not likely to interest the planning boards of developing countries very much.

[65] *Ibid.*, p. 105.

McClelland also finds "independent evidence" with regard to ancient Greece. Other psychological studies have indicated a relationship between the level of *n*-achievement of individuals and the form of individual "doodles." McClelland relates the design of "doodles" to changes in the designs on Grecian urns, and in this manner measures once again changes in the level of *n-ach* in Grecian society from one era to another. He finds that the signs of high *n*-achievement are most frequent in the period of growth and significantly less frequent in the period of climax. What his results actually show, however, is that *n-ach* as measured by designs on vases declined throughout eight centuries, making it a little difficult to explain the rise and fall of Greek trade in these terms alone.

Nevertheless, encouraged by this "success" with Greek vases, McClelland goes on to apply the same method to the ancient Incas of Peru. Not having trading area figures, he shifts to measuring development by the volume of public building. The level of *n*-achievement, as measured by designs on pottery, declined fairly rapidly for six centuries, more slowly for two more, rose rapidly for five centuries, and dropped drastically between 550 and 700 A.D. The volume of public building rose rapidly during the nine centuries of declining *n-ach* and rose more slowly through the five centuries of rising *n-ach*, which would seem to cast doubt on the thesis. But McClelland feels that his thesis is borne out by these data too, because "two high levels of *n*-achievement are followed by marked cultural growth, and two low levels are followed by conquest by outside civilizations." Are we then to shift to military success as the measure of development?

n-Achievement and Entrepreneurship

The next step in establishing the chain of causation is to show that high levels of *n*-achievement are associated with entrepreneurial endeavor. In general, McClelland does this by establishing that people with high *n-ach* like taking moderate risks: "They should have personality characteristics which should lead them to 'blossom' under conditions of moderate uncertainty where their efforts or skills can make a difference in the outcome." [56] The sort of proof he offers is that high-*n-ach* children like to stand a moderate distance from the peg when tossing rings, whereas low-*n-ach* children like to stand close or far away. In studying *n-ach* in relation to managerial success, he found that with a certain amount of reshuffling of data he could show a tendency for the high-*n-ach* individuals to earn high salaries in small companies. In large companies, however, it was quite clear that the highest *n-ach* individuals earned salaries in the middle range, with lower *n-ach* managers both above and below them on the salary scale. So confident is the author of his thesis, however, that he is willing to believe that high salaries associated with relatively low-*n-ach* probably reflect inherited influence or personal charm, or something else other than entrepreneurial drive.

[56] *Ibid.*, p. 211.

Sources of *n*-Achievement

If *n-ach* is to be a policy variable in promoting economic growth, we must know its origins. Not surprisingly, McClelland finds the source of *n*-achievement mainly in family environment and childhood training. Mothers with moderate levels of *n-ach* of their own are most likely to produce sons with high *n-ach*; "the mother with too high a level of *n*-achievement may make too early demands on her son, or she may be too interested in her own success to be interested in her son's." [57] Similarly, moderate pressure to become self-reliant works best. "Early mastery training promotes high *n*-achievement, *provided* it does not reflect generalized restrictiveness, authoritarianism, or 'rejection' by the parents. . . . Or, to look at it another way, the boy can be put on his own either too early, as in the predominantly lower-class early caretaking families, or too late, as in the predominantly middle-class families that expect achievement and independence quite late." [58] (Does this mean that upper-class families are likely to remain upper-class, contrary to the "shirt-sleeves to shirt-sleeves" legend?)

Policy Implications

The Max Weber thesis concerning the rise of capitalism, McClelland says at the outset of his final chapter, "can now be understood as a special case, by no means limited to Protestantism, of a general increase in *n*-achievement produced by an ideological change." What is required to launch a similar process in traditional societies today is increased "other-directedness and market morality." Once the need for a new orientation is "clearly and unequivocally accepted," the rest is easy and follows the ordinary prescriptions of the economic development planner—communications, transport, electricity, newspapers, "even public speeches." But resistance to modernization is likely to be massive, and can best be overcome by equally massive ideological campaigns of the sort brought by Communism in our day and by religious movements in the past. Apart from inducing change, such ideological movements provide "an important source of emotional security for people who are rendered rootless and unhappy by the disruption of traditional ways of doing things."

An informed public opinion will help. So will emancipation of women. Much can be taught by properly directed group play. "Drawing individuals out of their homes into *centers of employment* appears more likely to break up traditional value patterns"—creation of "sociological pôles de croissance," we might say. But McClelland is not over-sanguine about what can be done by education alone; the crucial years for creation of high levels of *n-ach* are probably those between the ages of five and ten. Nursery schools might help. But on the whole, "a government or an outside agency apparently cannot do much to stimulate an increase in national *n*-achievement levels." Consequently, development planners will

[57] *Ibid.*, p. 349.
[58] *Ibid.*, p. 345.

do well to concentrate on utilizing existing *n*-achievement resources more efficiently. McClelland mentions rural industrialization, subcontracting to local firms, and creation of industrial estates as useful devices.

All this sounds rather discouraging; but McClelland is eager to disassociate himself from the pessimism of the Hagen theory of social change, to which we turn in the next section. "Neither Hagen nor his theory" he writes "has much to offer those working with the Burmese or the Sioux, except to tell them to be patient. In two or three generations their clients may pass through retreatism into the innovative, economically active phase. Who knows? I strongly suspect that in the Burmese case the Communists will have a chance to prove that it needn't take so long, for they 'naively' reject Freudian pessimism and espouse a Skinnerian optimism about the infinite educability of human beings through ideological reform." [59]

Evaluation of the McClelland Thesis

McClelland's work is obviously bold, imaginative, and entertaining. But it is hard to see what there is about his loosely related series of psychological experiments and statistical tests that makes his methodology more "rigorously empirical" than the cautious work of the econometricians—work of which McClelland seems largely unaware.[60] Econometricians like to have a tight, logically consistent theoretical model, mathematically expressed, to begin with. When putting numbers into such a model they like their regression coefficients to be high—not just within the range of statistical significance—and they like the regression coefficients for the

[59] David C. McClelland, "A Psychological Approach to Economic Development," *Economic Development and Cultural Change*, April, 1964, p. 324.

[60] It is clear, too, that McClelland has not always understood the economics he has read. One should not chide a psychologist for not being an economist—except when he claims to write better economics than the economists. For example, he describes the use of the "profit motive" in economic analysis as a "typical oversimplification of rational or armchair psychology." Not that entrepreneurs have no interest in profitability, but they are not interested in money as such. The interest in profit can now be understood, he says, "not in terms of the naive psychology of the 'profit motive' but in terms of a need for Achievement which is interested in profitability precisely because it gives definite knowledge of how competent one is." Of course this is exactly the way economists have viewed the "profit motive," even if the term "*n*-achievement" was not used. It has long been clear that money as such was not the objective, and that from the psychological point of view profits were important mainly as a measure of success. It is just not true that non-Marxist as well as Marxist economists pictured capitalists as "driven by greed," as McClelland would have it. The "profit motive" was never thought of as a "motive" in the psychological sense; the expression was simply a shorthand for the formal assumption that other things being equal, men who are involved in policy-making for enterprises will try to set prices, determine the product mix, choose plant locations, and type of equipment, etc., so as to increase rather than decrease the profitability of the firm. Among the "other things" kept "equal" in this assumption was the cost in time and energy to the entrepreneur himself of alternative policies. Recently Robin Marris and some other economists, observing the lengths to which the managerial revolution has gone, have suggested that a more useful assumption may be that entrepreneurs try to maximize the rate of growth of the firm rather than its profitability to the shareholders; but this change in assumption does not reflect a new view of the basic psychological motivation of enterpreneurs, but rather reflects recognition of a change in the economic power-structure.

variables given causal significance to be substantially higher than those for variables that are rejected as causal factors. Some of McClelland's correlations, even if within the bounds of statistical significance, would seem frighteningly low to most econometricians, and when these are strung together in a chain where every link is weak, the causal connection between the variables at each end of the chain seems very weak indeed.

If McClelland is telling us once again that societies conducive to the generation of effective entrepreneurship are likely to have more rapid development than societies that are not, he is not adding much to our knowledge. To make a real contribution he must be able to identify *n*-achievement clearly as an independent variable, measure it in a uniform manner permitting interspatial and intertemporal comparisons, show precisely that there is a stronger link between this variable and entrepreneurship than there is between entrepreneurship and other variables, and tell us how to create or direct *n*-achievement in operational terms. His book, stimulating as it is, falls far short of meeting these criteria.

The Theory of Social Change

The most ambitious effort to date to construct a general theory of development based on a nexus of sociological, anthropological, and psychological factors is Professor Everett Hagen's.[61] According to its author, the book "examines the factors which cause a traditional society to become one in which economic growth is occurring. . . . [It] attempts to contribute to knowledge of the process of economic growth, and in doing so to make some additions to the content of social theory, and suggests some changes in its method of analysis." This effort requires integration of "the three major social sciences": anthropology, sociology, and psychology —especially psychoanalysis. The book is in the grand tradition of theories of entrepreneurship, along the lines of Weber, Tawney, and Schumpeter, but is if anything even more interdisciplinary than these. Hagen's debt to David McClelland, with his concepts of "need-achievement," "need-aggression," and the like is substantial, and one that Hagen is happy to acknowledge, even if McClelland declines the honor.[62] His other debt is to those theories of entrepreneurship, such as Schumpeter's, which have run in terms of the emergence of entrepreneurial activity from a fairly clearly defined and relatively small group, constituting a socially deviant, subdominant, or threatened elite.

The book has its genesis in the dissatisfaction Hagen felt with his own discipline while serving as economic advisor in Burma; Part I of the book

[61] Everett E. Hagen, *The Theory of Social Change: How Economic Growth Begins* (Homewood, Ill., 1962).

[62] In his review of Hagen, McClelland writes, "Psychological analysis of this type requires a far greater discipline, a far greater concern for operational precision and the laws of parsimony than Professor Hagen shows, if it is not to be laughed out of court." Hagen's dynamics, he says, "leaves at least this clinical psychologist breathless." McClelland, *op. cit.*, pp. 320–24.

is devoted to showing the inadequacy of standard economic models as an explanation of economic growth.[63] Hagen concludes that "economic growth theory has rather little to offer towards an explanation of economic growth, and that broader social and psychological considerations are pertinent." More discouraging is his view that "The transition to economic growth, one may reasonably conclude from these several examples, typically occupies a period of several generations." [64] He begins his analysis by setting up an idealized form of peasant society which he then contrasts with the industrialized society in order to isolate its distinguishing characteristics. Hagen's "village," and also his "peasant" and his "elite," are highly idealized concepts, at least as abstract as Adam Smith's "economic man." Hagen is, of course, well aware that his model is an abstraction and a generalization.[65] The question is, as Hagen rightly points out, not whether the model is abstract but whether it is useful in increasing our understanding of the problem and process under investigation. In any case, his claims for his model are considerable: [66]

> The following chapters then evolve, piece by piece, a fully defined model of society, a model which stresses the chain of causation from social structure through parental behavior to childhood environment and then that from childhood environment through personality to social change.

Hagen occasionally gives way to excessive particularism in his idealized image of the village society. He says, for example, "The typical house consists of one room. Except in cold country, the floor is the dirt of the ground." Hagen must know that in Indonesian villages, for example, houses have more than one room and the bamboo floor is usually raised above the ground. There are a number of tropical regions where the soil and climate dictate that houses should be built on stilts. Of what use are such details when not even generally applicable?

In general, the picture he gives of village society does less than full justice to the level of civilization achieved in peasant societies, particularly in Asia. He refers to the "tank which will hold the village water supply"; one thinks immediately of the medieval "tanks" in Ceylon, which were in fact small lakes and the foundation of rather impressive irrigation systems. It would seem more useful to stress the lack of any significant difference in the degree of technological advance in Europe and Asia, at least up to the time when the Portuguese arrived in Asia at the beginning of the sixteenth century, than to stress the differences today. Attention is then properly focussed on the interaction of events taking place in Europe and Asia after that time, in the manner of Clifford Geertz' book, *Agricultural Involution in Java.*

[63] Parts II and III, which constitute about half of the book, present Hagen's own general theory of economic development and social change, in terms of socio-cultural patterns and their impact on personality traits. Parts IV and V are devoted to case studies designed to document the general theory, in England, Japan, Colombia, Burma, and the Sioux reservations.

[64] Hagen, *op. cit.*, p. 22.

[65] In his Appendix II, in which he criticizes the Rostow stage theory of development, Hagen recognizes the Rostow model as a "heroic simplication," and then adds, correctly, the "this is not a defect, but rather a quality of any fairly general theory. My own model of society and personality involves simplications no less drastic."

[66] *Ibid.*, p. 8.

Hagen can, of course, argue that the more advanced villages of Southeast Asia are no longer "traditional" in his sense; his reasoning is always uncomfortably close to circularity.[67] But their departure from "traditionalism" in this sense does not prevent many of these villages from being stagnant in terms of per capita income and occupational structure.

Hagen's main thesis can be assembled from a number of his summary statements. To understand why some traditional societies enter into economic growth sooner than others, he maintains, we must understand the internal structure and functioning of these societies; both the barriers to growth and the causes of growth seem to be largely internal rather than external. The traditional society is dual or triple, consisting of the "peasantry and other simple folk, the elite classes, and, on one side, the trader-financier." This traditional society leads to a particular type of uncreative and non-innovational individual behavior. A member of a traditional society is uncreative because he sees the world as an arbitrary place rather than one subject to analysis and control. His unconscious processes are both inaccessible and uncreative. Interpersonal relations are solved on the basis of "ascriptive authority"; and people avoid anxiety by resort to authority. However, out of traditional society emerge some creative individuals, particularly the "anxious innovator." His childhood training has been such that he "anticipates success" each time he tries to achieve later in life, but "because success is not a foregone conclusion, he forever feels a need to try another task and reassure himself."

Technological change is difficult in traditional society. Who will introduce it? The urban craftsman does not have the capital and cannot obtain the credit for such a venture because bankers "do not customarily look upon him as worthy of credit except on a pawnshop basis." A member of the elite, on the other hand, would not set up a modernized textile enterprise because it would be demeaning himself. In a peasant society, large-scale enterprise can be introduced only by foreigners. An isolated deviant with the necessary need-autonomy, need-achievement, and creative imagination will be hemmed in by social pressures tending against cumulative innovation and change. Here Hagen seems almost to be saying that traditional society does not change because its nature is such as to be resistant to change; economic development takes place where the socio-cultural conditions are appropriate for it, and cannot take place otherwise.

Because traditional society is so resistant to change, the forces that disrupt it must be powerful ones. The change comes about if and when members of some one social group perceive that their purposes and values are not respected by groups in the society whom they respect and whose esteem they value. Such social disaffection is most readily apparent when

[67] As McClelland puts it, "Professor Hagen is playing 'heads I win; tails you lose.' Any case can be made to fit his hypothesis so long as it remains so flexible." *Op. cit.*, p. 323.

a group migrates to a new society. However, there are only four types of events that result in withdrawal of status: a change in the power structure, derogation of institutional activity without change in the power structure, contradiction among status symbols, and non-acceptance of expected status on migration to a new society.

Hagen proceeds to an analysis in terms of Merton's typology of modes of individual adaptation: conformity, innovation, ritualism, retreatism, and rebellion. Retreatism, Hagen believes, is the typical reaction to withdrawal of status. The retreatist person, he says, "is not free of rage." On the contrary, "his rage is intense," but held in leash, with occasional outbursts. However, retreatist parents give rise to creative children; and the Hagen gives a number of cases in point.

Hagen then goes on to argue that growth in the size of the market or a more rapid rate of capital accumulation is relevant only in the sense that "the more favorable these economic circumstances are, the more readily change in personality may bring about continuing technological progress." However, he insists that where the socio-cultural environment is appropriate and an innovational effort is present, an expanding market is created almost automatically. Similarly, under these conditions, the ratio of savings and investment to income will rise more or less automatically. True, if economic conditions change for the better, at the same time that personality traits become more favorable, the impetus for growth is increased. But the change in personality is empirically more important, and it is therefore more convenient to treat the economic situation as a datum or parameter.

Hagen's long economic history of England seems to add little to our knowledge; it merely translates well-known facts into his particular jargon. For example, in the War of 1642 "the king was supported by most of the titled nobles, Catholics, Anglican clergy, gentry, especially the greater gentry, and peasantry, who because of their high need-submission tend in almost every society to remain loyal to the traditional regime. . . ." On what kind of empirical observation is such a statement based?

Just how much Hagen's gigantic intellectual efforts have advanced our knowledge of the process of economic development is an open question. particularly if by "knowledge" we mean understanding of a kind that provides guidance to policy decisions. In a general way we have known for a long time that culture patterns and personality traits are important in determining the rate of economic development and cultural change. Hagen's discussion of "the impotence of the peasant" is reminiscent of Boeke's observations on "the voiceless East." And it is to be doubted that such statements as, "the creative individual is not necessarily a happy man who faces problems with pure pleasure," or "the individual with conflicting needs may be paralyzed, or he may oscillate between contradictory actions," are really contributions to knowledge. Hagen's appendix on "toilet training" recalls a remark made many years ago by Ronald Walker: Suppose one learns that the tightness or easiness of money reflects the anal eroticism of bankers, what exactly does one do about it?

It is hard to see what is left for the economic adviser if this sort of

theory of growth is accepted. Indeed Hagen (together with the remaining "old-fashioned" anthropologists) may well be pleased to see economists kept at home until somehow or other the socio-cultural stage in one country after another is set for economic development—by which time, presumably their advice will hardly be necessary anyhow.

The Evidence[68]

Let us examine one of Hagen's more extensive attempts at factual support for his thesis: the case of Colombia. He begins with a brief summary of economic growth since the middle of the nineteenth century, and then asks, "Why did growth begin?" The reasons usually given for economic growth, he replies, were not operative in Colombia. The economy grew, not because of foreign capital inflow, or contact with foreign technology, or construction of social overhead capital, or large and growing markets, but despite the absence of all these factors. His conclusion is that continuing growth was launched by a particular group of Colombians: the people of Antioquia. It was they who provided the entrepreneurial leadership. Hagen states the general conditions that led to the emergence of the Antioqueño as the entrepreneur: [69]

> Under some human motivation or other, a group must come to perceive it to be both possible and good to undertake acts of capital investment. . . . What appears to be required . . . is not merely an appropriate value system but two further conditions: first, the new élite must feel itself denied the conventional routes to prestige and power by the traditional less acquisitive society of which it is a part; second, the traditional society must be sufficiently flexible (or weak) to permit its members to seek material advance (or political power) as a route upwards alternative to conformity.

To support the contention that Antioqueños hold a more than proportionate share of entrepreneurial positions in the country, Hagen conducted some statistical tests, using telephone directories and lists of executives compiled by the National Association of Industrialists. In trying to discover the reasons for the Antioqueños fitting the role of the "sub-dominant élite," he discovers four possible determinants:

1. Ancestral background. (Probably Basque.)

2. Mining experience. (Although much gold was taken out of the Antioquia area during the first years of the Spanish occupation the supply was soon exhausted. Since neither Indians nor Negro slaves were available, the mine owners were forced to work their own claims. This experience may have conditioned the Antioqueño for acceptance of the role of industrialist more so than his counterpart in other sections of the country.)

3. Loss of foreign trade. (Before the turn of the century, several events

[68] This section shamelessly plagiarizes a term paper prepared for my seminar at the University of California by William Long.

[69] Hagen, *op. cit.*, p. 378.

led to the loss of profitable foreign trade. In Cali and Bogotá, the other main regions of the economy, displaced commercialists turned to land ownership and real estate speculation. However, in Antioquia, land was less productive and therefore provided less opportunity for profitable investment. The displaced commercialists in that region turned to industry, the only other avenue open to them.)

4. Withdrawal of status respect. (Colombians among the elite of other regions of the country looked down on those from Antioquia, primarily because they stooped so low as to actually get their hands dirty in working. The conclusion is that "the Antioqueños reacted gradually over a period of several centuries to withdrawal of status respect, and that this reaction and its impact on their personalities form an important strand in the explanation of the economic growth of Colombia." [70]

Hagen places primary emphasis on the withdrawal of status respect. To prove that Antioqueños are better entrepreneurs than other Colombians, he administered the Thematic Apperception Test (TAT) to a group of twenty business leaders in Antioquia. In these tests, the subject is shown a series of pictures, depicting people in various situations subject to differing interpretations. The interpretations given to the pictures enable the examiner to draw conclusions about the subject's basic psychological make-up.

In order to have a control group, Hagen administered the same test to a group of community leaders in the city of Popayán, the capital city of the Department of Cauca. The two sets of results consistently revealed a remarkable difference in the basic make-up of the two types of leaders. In commenting on these results, Hagen remarks: "It should be emphasized that what is portrayed is not a difference in personality between all Antioqueños and all Popayanese or other Colombians. The Antioqueños selected were those most apt to have creative personalities. *So, however, were the Popayanese, for they were community leaders.*" [71]

What then does this test prove? Hagen was looking for indicators of relative levels of creativity. His hypothesis was that this level would be different for entrepreneurs from Antioquia and for those from other parts of the country. Why then choose "community leaders" from Popayán as his control group? Why not business men from Bogotá, or Cali, or Barranquilla? Popayán is known as the city that is the most conservative, most resistant to technological change, and most leisure-oriented of all cities of its size in Colombia. In short, Hagen's choice of control group makes his test worthless.

Can we find no more satisfactory explanation of regional development differentials in Colombia? In its *Analyses and Projections of Economic Development*, the Economic Commission for Latin America divides the nation into five regions: [72]

[70] *Ibid.*

[71] *Ibid.*, p. 369. (Italics added).

[72] Economic Commission for Latin America, *Analyses and Projections of Economic Development: III—The Economic Development of Colombia* (United Nations, Department of Economic and Social Affairs, 1957), p. 285.

1. North (Barranquilla).
2. West Central (Medellin).
3. East Central (Bucaramanga).
4. Southeast (Bogotá).
5. South (Cali).

In 1960, the five central cities of these regions were the largest in Colombia. The United States Government publication, *Investment in Colombia* (1957),[73] gives only four regions: West, North, Southeast, and South. Each classification has its advantages and disadvantages, but in each the west or west central covers roughly the same area and constitutes the "rich region."

What is there about the west or west central region (here called Antioquia) that it should be more progressive than the others? Two sets of historical developments differentiate Antioquia from the other regions. The first relates to coffee and the second to manufacturing.

The advantage of Antioquia in the production of coffee seems to be the single most important factor in the relatively rapid economic growth of the region, explaining in large measure both the subsequent industrialization and the development of entrepreneurship. Coffee was introduced to Colombia in 1808 via Venezuela, and was first cultivated in Cucuta. It spread a little later to Bucaramanga. Later still it spread to the areas bordering the Mag River. It seems that the first planting in Caldas was at Pereira, in 1886. At some time in the 1880's, coffee became the leading Colombian export, and it has retained that position ever since. By 1900, Antioquia and Caldas were exporting over half of all coffee exported from the country, and they have continued to do ever since.

The dominance of the Antioquia region in the production of coffee is mainly due to three factors: first, the type of soil found in the region is superior for coffee; second, the relative proportion of coffee-producing land in the region is high; and third, transportation facilities are better. James J. Parsons has this to say about the influence of volcanic activity on coffee production in Colombia: [74]

> The fertile slopes of the Cerro Bravo were the forcing-bed of western Colombia's modern coffee economy. . . . this Mellizos-Cerro Bravo volcanic zone has been the primary geographic factor in the development of the Antioqueño settlement pattern and the coffee economy of Antioquia and Caldas . . . Caldas, much more than any other department, has received the benefits of volcanic ash deposits.

Caldas, which produces almost one-third of Colombia's coffee, is the smallest of the sixteen departments. It has the smallest number of producing coffee trees per hectare. But, in total area under cultivation, total production, yield per producing tree, and income per hectare, it is first in

[73] Office of International Trade, *Investment in Colombia* (Washington, 1957), pp. 61–67.

[74] James J. Parsons, *Antioqueño Colonization in Western Colombia* (Berkeley and Los Angeles, 1949), pp. 39–40.

the nation. It is also first in proportion of total trees that are yielding trees, and in man-hours per hectare. Yet in income per man-hour, Caldas is sixth in the nation, below the national average. It seems that Caldas' dominance in coffee production is due solely to natural conditions, not to farmers' greater initiative. A similar story could be told for the department of Antioquia, where income per man-hour is eighth in the nation.

Caldas has a unique position also in regard to topography. The *arabica* coffee grown in Colombia grows at altitudes between 3,000 and 6,000 feet.[75] Over 90 per cent of coffee in Colombia is grown in the altitude range 3,280 to 6,560 feet. Caldas has a higher percentage of coffee-producing land, at appropriate altitudes, than any of the other departments.

The transportation network in the region is far from natural. Coffee became the leading export *for the nation* before it was grown extensively in the Antioquia region. When it was discovered that the region had the natural advantages listed above, it was in the nation's interest to facilitate production there. The solution was to build a railroad into the interior of the region. The first line, from Medellín to Puerto Berrio (on the Magdalena) was started in 1874 by the government of Antioquia. It was not completed until 1929, but as each section was finished it found immediate use.

In 1926, after about fifteen years of indecision as to the best solution to the problem, an English firm was contracted to construct a tunnel through the Quiebra. This project accounts for much of the foreign capital inflow of 1925–29. Of total public investment in these years over one-half was in the department of Antioquia. The tunnel was completed in 1929, and Medellín then had a direct link to the Magdalena River. A similar story could be told for the highway system.

Once the transport system was built for coffee it was available for manufacturing as well. The ECLA study on the economic development of Colombia, commenting on the general development of industry in Colombia, gives a list of reasons for the establishment of the first manufacturing nucleus in the department of Antioquia: [76]

1. It was one of the largest population centers and had a relatively high income.

2. It was the principal coffee-producing center. It received the major share of the benefits of export earnings. Therefore it had the greatest opportunities for financing manufacturing investment.

3. The limited amount of coffee-producing land led to investment in non-agricultural activities.

4. Because it was the coffee-exporting center it had many advantages with respect to the means of communication, for priority was given to facilities for the transportation of coffee. Of public investment made in the late twenties, over half of it was in Antioquia. Internal transport costs

[75] William H. Ukers, *All About Coffee* (New York, 1935), pp. 134–35.
[76] Economic Commission for Latin America, *op. cit.*, p. 262.

from the coast for imported end products were still sufficiently high to form a natural protection for local industries.

5. A greater available capacity for the production of electric energy.

Are we not justified in concluding that the causal sequence runs from coffee to transportation facilities to manufacturing? Antioquia's advantages in these areas have been to a large extent "natural," and have been effectively supplemented by public investment and foreign investment in the infrastructure. At the very least, such familiar explanations of Antioquia's more rapid growth seem just as plausible as Hagen's explanation in terms of personality traits.[77]

What seems to be needed is not the Hagen-style model, which relies wholly on socio-cultural and psychological factors to explain social change and economic growth, but rather a model in which strategic "economic" and "non-economic" variables are combined. Hagen comes closest to this sort of model in discussing the interactions of personality change, capital accumulation, and growth of markets. But even there he relegates the purely economic factors to a minor role.

The need for interdisciplinary research in the field of economic conditions is now recognized by all practitioners in the field. There still is doubt, however, as to whether the most effective kind of interdisciplinary work consists of teamwork among specialists in the various disciplines, or efforts by individual scholars to combine in their own mind facets of all the related disciplines. It may well be, as Professor Max Millikan suggests in his Foreword to Hagen's book, that rare beings such as Everett Hagen, "at home in each of a number of usually rather isolated ivory towers . . . make possible a degree of communication amongst [various disciplines] that would [be] much more difficult in his absence." But such rare beings are not our only hope; there remains the possibility of interdisciplinary teamwork. The integration need not be achieved in a single mind. Social scientists (other than economists) with a policy-oriented, operational interest in economic development are still rare; but when and where they can be found and assembled for a joint attack on development problems, this seems to be a better solution to cross-disciplinary problems.

The Anthropologist's Viewpoint

Today it is not the anthropologists or sociologists who are claiming that the socio-cultural characteristics of underdeveloped countries (or "peasant societies") are insuperable barriers to economic growth. In the conclusion of his comparative study of entrepreneurship in east-central Java and Bali, Clifford Geertz says: [78]

[77] With regard to Hagen's empirical evidence, David McClelland says, "He has nowhere shown conclusively that loss of respect *preceded* ideological change or even entrepreneurial behavior. On the contrary, there is some evidence that disrespect sometimes accompanied or followed being successful in business, as in the case of the Antioqueños." *Op. cit.*, p. 323.
[78] Clifford Geertz, *Peddlers and Princes; Social Development and Economic Change in Two Indonesian Towns* (Chicago, 1963), pp. 144–45.

The issue, properly stated however, is not whether each and every aspect of society must change or nothing but the economy itself must change in the process of economic rationalization; for clearly neither of these extreme positions is defensible. Rather it is: what must change and what need not?

Professor Geertz' studies lead him to the conclusion that a wide range of cultures is capable of generating entrepreneurship and economic growth. The problem is to recognize in each culture those forces which are conducive to growth and those which are not: [79]

> From a narrowly economic point of view development takes the same general form always and everywhere; it consists of a progressively more rational employment of scarce means toward the achievement of specified material ends. But from the sociological point of view it is not clear that such a basic and obvious similarity of form exists, that the changes in religious outlook, class structure, family organization and so on are identical from one developing society to another. In any case, the employment of highly generalized dichotomous concepts of holistic types, to describe the broader processes in the light of our still confused and uncertain understanding of them and of their inter-relations with the much better conceptualized processes of economic rationalization would seem premature.

On the basis of his own studies, Geertz is willing to risk only six generalizations: (1) Innovative economic leadership (entrepreneurship) occurs in a fairly well-defined and socially homogeneous group; (2) This innovative group has crystallized out of a larger traditional group which has a very long history of extravillage status and interlocal orientation; (3) The larger group out of which the innovative group is emerging is one that is at present experiencing a fairly radical change in its relationships with the wider society of which it is a part; (4) On the ideological level the innovative group conceives of itself as the main vehicle of religious moral excellence within a generally wayward, unenlightened, or heedless community; (5) The major innovations and innovational problems the entrepreneurs face are organizational rather than technical, and (6) The function of the entrepreneur in such transitional but pretake-off societies is mainly to adapt customarily established means to novel ends.

These generalizations are not inconsistent with the Hagen thesis, but their implications for policy, and the prognosis that one might base on them, are very different indeed. With respect to Indonesia in particular, Geertz' conclusion is not that drastic changes in the social organization or culture patterns are a prerequisite to economic development; it is rather that economic development planning should take due account of the differences in these factors from one part of the country to another, and should not stifle the internal dynamics of individual cultures by trying to force every society within Indonesia into the same developmental mold. "To say that Indonesian development must in great part be consciously planned," Geertz writes, "is not to say that such planning should

[79] *Ibid.*, p. 145.

take place in deliberate ignorance of the very domestic social and cultural processes which it is supposedly concerned to transform. . . . For successful developmental planning within an at least partially democratic framework it is necessary that programs and policies be designed to encourage, support, and intensify processes of economic rationalization such as those described for Modjokuto and Tabanan as they appear throughout the whole of the country, and that government-sponsored enterprise be keyed in with that arising autochthonously in the general population." [80]

Anthropologist Charles Eramus is even more insistent on the dominance of economic factors in economic development, and the possibilities for adapting cultures to the needs of economic growth. He lays great stress on the significance of the "demonstration effect" in inducing technological change. As an example of successful intervention he describes the terracing to prevent erosion in the Bío-Bío River in Chile. The terraces, he says, survived "a downpour of flood proportions," which caused much damage to neighboring fields which were not terraced. This demonstration led to many requests for similar assistance, and to the ultimate establishment of a soil conservation department in the Ministry of Agriculture.[81]

Similarly, the introduction into Bolivia of Cuban yellow corn, which is quick-growing and weevil-resistant, led to the introduction of this strain by one-third of all the farmers in the area within two years. Again, the mosaic-resistant sugarcane in Colombia and Costa Rica, and the disease-resistant Kennebec potatoes substantially replaced local varieties within three years after their introduction by foreign technical assistance experts. According to Erasmus, the motivation was economic in the simplest and purest form. Depending on the level of living of the farmers concerned, "in some cases the motivation of the farmers of Bolivia, Colombia and Costa Rica was to increase survival margins, and in other cases to increase conspicuous consumption." [82] For an economic development planner, it is not of great importance which of these two motives is in operation; all that is necessary is to be sure that people want to increase their real incomes.

Erasmus also contrasts the success of penicillin injection against yaws in Colombia with the failure of water purification in Ecuador. People must either have a high level of knowledge and literacy so that they can understand what is being attempted, or the demonstration effect must be clear. "People choose new alternatives or controls," Erasmus maintains, "when frequency interpretations make possible a clear connection with reward." Although the language is slightly different, this statement is precisely the kind of assumption about human behavior that underlies ordinary economic analysis.

Erasmus also points out that failure of pilot projects is sometimes attributed to cultural resistance when, in fact, the explanation is purely technical. He describes as an example the failure of irrigation systems introduced in Mexico. The refusal of the local population to use appar-

[80] *Ibid.*, p. 156.
[81] Charles Erasmus, *Man Takes Control* (Minneapolis, 1961).
[82] *Ibid.*, pp. 23–25.

ently superior techniques was not so much due to cultural resistance, he argues, but to relevant technical factors which were overlooked by the Western "expert." The system consisted of scraping the topsoil into the dikes, which washed away during the floods, leaving the soil denuded. In any case, the summer rains came too late to get a crop in before the frost.

Erasmus cites cases where hybrid corn was rejected by Mexicans and American Indians; despite the higher yield per acre, it was unacceptable because "it makes poor tortillas." The rejection of the higher-yield corn cannot be regarded as "non-economic"; in the absence of a market for corn surplus, the yield was really lower with the hybrid corn because it produced less in the way of satisfaction for the farmers. The same is true of cassava and rice in Indonesia; the caloric content per acre is higher if cassava is grown than if rice is grown, but cassava is regarded as inferior food to which the Javanese resort only under conditions of severe hardship. Thus, in true economic terms, the yields are lower when the land is put under cassava.

An example from the present writer's own experience is the slaughter of the cattle, provided to farmers in the pilot-zone regional development project in Greece as the basis for building up a dairy herd. The cattle were killed and eaten not because there was cultural resistance to dairy farming but because the transportation connections of the pilot zone with the outside world were so poor, and consequently the price of feed so high and the price of dairy products so low, that there was really no incentive to build up dairy herds.[83]

Erasmus also mentions the case of soybeans in Colombia, which were abandoned except in those cases where margarine factories were established, thus providing a market for a surplus. There is nothing "economic" in eating highly nutritious but unpleasant food.

In his conclusions, Erasmus denies that there is any serious cultural lag that delays or retards technological change:

> I agree, of course, that society must continually adjust to its technological changes, but it does not lag far behind them waiting for students of society to find a short-cut to Utopia. . . . For the sake of argument a better case might be made for technological . . . rather than social . . . lag in the world today.

By technological lag he means the lag of productivity behind advanced ideas of social welfare. Where low-income peoples have difficulty in accepting new technologies, Erasmus maintains, "the lag is really between the felt needs of the host group and those of the donors of technology." But "where we are faced with rising expectations—that is, with helping people satisfy needs they already feel—social conditions will no longer be a major concern for the lag will be primarily technological." [84]

Regarding the development problem as essentially economic and technological, Erasmus takes a dim view of community development: [85]

[83] For a full discussion of the pilot zone experiment, see Chap. 32.
[84] *Ibid.*, p. 312.
[85] *Ibid.*, p. 320.

> I am opposed to the notion that construction projects are Quixotic and extravagant compared to the inexpensive, self-help projects through which people are supposedly taught to help themselves by their own bootstraps. The ideas that we can advance underdeveloped areas by small changes promoted by ingenuous, Messianic technician-inventors, the like of which I seldom encountered in the flesh, and all at little cost to themselves, is wishful fantasy.

His studies, coupled with his own experience with technical assistance missions in Latin American countries, lead Erasmus to conclude that "technical assistance is most likely to be successful when it works with market-oriented goals among people producing for the market."

Finally, Erasmus concludes that sociologists and anthropologists can be of greatest value in helping to select areas ripe for development through projects that involve investment in "positive controls rather than persuasion." In short, there is no escape from the "big push" on the economic front.

The "Revisits"

To this kind of evidence we can add the results of the increasingly frequent "revisits" by anthropologists to areas studied earlier, which have since been subject to some major outside shock. The import of these "revisits" is that cultural change can come with great rapidity, and apparently with little suffering on the part of the peoples involved, where the magnitude of the outside shock is great enough. Most famous of the revisits, perhaps, is Margaret Mead's description of the transformation of Manus' society as a consequence of the occupation of the island by American troops during World War II.[86] The demonstration effect of having on the island a number of American GI's considerably in excess of the local population resulted in the Manus' culture jumping 2,000 years in ten. Why should not a well-construed economic development program have a similar effect?

In appraising the significance of her revisit to the Manus, Margaret Mead characterizes the anthropology of the first four decades of the twentieth century. In this period, she says, anthropologists were concerned with demonstrating that the human race was one, and that the various races of mankind were specializations without measurable differences in their capacity as groups of individuals to take on any civilizations; that each people has a shared, learned way of life, or "culture"; and that this culture should be respected, in the same way that individual human beings should each be respected. This approach led consciously or unconsciously to an attitude among anthropologists that regarded rapid cultural change as something imposed on a society from outside. However, "Now our old sense that all change was one-sided and came from a misuse of power suffered a new transformation. All change was now seen as terribly difficult and against the real will of the people, who only thought they wanted

[86] Margaret Mead, *New Lives for Old* (New York, 1956). See also Daniel Lerner, *The Passing of Traditional Society: Modernizing the Middle East.* (Glencoe, Ill., 1958).

tractors because they were symbols of Western superiority but who really hated regular hours, clocks, machines, hospitals, the dictates of nutritionists, sitting still in school, and learning to think in realistic Western terms." [87] (The present writer is tempted to add—like any Western child!)

The experience of the Manus, Dr. Mead concludes, "points up the completeness with which the people may want to change rather than merely submit to being changed." She also suggests that the interest in preserving aspects of the traditional culture may really lie with the Westerner who is somewhat concerned with other cultures, rather than with the people of that society itself. It is necessary to offer people all aspects of a new civilization if it is to be attractive, and not just bits and pieces: [88]

> The first groups of women who are admitted to some male occupation perform astonishingly well, learn faster than the norm for men, while women who enter the same occupation after it has been defined as something done by men and women will show no such conspicuous superiority. Throwing off colonial yokes, which have included definition as second class human beings, has the same releasing effect on members of former colonial status.

The study of the Manus suggests the importance of a "Gestalt" approach: "It is easier to shift from being a South Sea Islander to being a New Yorker—as I have seen Samoans do—than to shift from being a perfectly adjusted traditional South Sea Islander to a partly civilized, partly accultured South Sea Islander." Each human culture, like each language, is a whole, and is capable of being learned. The term "learned" is the keynote; where culture is learned, it can be changed by re-education.

Nor does Dr. Mead feel that rapid change is necessarily painful. On the contrary, she maintains that rapid change may well be less upsetting than gradual change.

The Manus experience shows [89]

> that rapid change is not only possible, but may actually be very desirable, that instead of advocating slow partial changes we should advocate that a people who choose to practice a new technology, or enter into drastically new kinds of economic relationships, will do this more easily if they live in different houses, wear different clothes, and eat different, or differently cooked, food. . . . The alternative to the culture which has existed so long and changed so slowly that every item of behavior is part of a pattern and so perfect that it seems that it must have sprung complete from the head of Jove, is seen to be not the culture in which necessary and wanted change is artificially slowed down and retarded, but rather the culture in which—if there is to be purposeful change, by an Ataturk . . . an enterprising Maharajah, or the agriculture extension department—the whole pattern is transformed at once, with as little reminder of the past as possible to slow down the new learning, or to make that learning incomplete and maladaptive.

[87] Margaret Mead, "From the Stone Age to the Twentieth Century," in Novack and Lekachman, *op. cit.*, p. 201.
[88] *Ibid.*, p. 203.
[89] *Ibid.*, pp. 204–205.

The Backward Bending Supply Curve of Effort

Perhaps no presumed characteristic of primitive or peasant societies has been more frequently cited as a barrier to development than "limited wants" or the "backward bending supply curve of effort." Thus J. L. Sadie, for example, is impressed by the socio-cultural resistances to economic change among the South African Bantus. They are community-centered rather than individualistic, he says, and abundance of material things plays no role in their philosophy. One would like to know whether the Bantus had ever been presented with a picture of a life fundamentally different from the one they have, and capable of achievement by their own efforts. In any case, Sadie concludes that: [90]

> There is much to be gained and many misconceptions can be avoided, if the economic problem of an underdeveloped community of the type described above is framed, not in terms of the vicious circle of poverty, Malthusian pressure or inadequate capital formation, etc., but in terms of the strategic factors of an ultimate character, namely its social and psychological inertia.

The basic mistake here is in assuming that there is a difference between these two approaches. Obviously, the vicious circle of poverty, Malthusian pressure, and inadequate capital formation are the products of that very social and psychological inertia to which Sadie refers. If the leaders of the society were in a position to assure adequate capital formation, offsetting Malthusian pressure and breaking the vicious circle of poverty, the socio- and psychological inertia would have disappeared among the leaders, and would soon disappear among the people.

At another point, however, Sadie buttresses the conclusion of Margaret Mead: [91]

> Economic development of an underdeveloped people by themselves is not compatible with the maintenance of their traditional customs and mores. A break with the latter is a prerequisite to economic progress. What is needed is a revolution in the totality of social, cultural and religious institutions and habits, and thus in their psychological attitude, their philosophy and way of life.

As pointed out above,[92] there is little doubt that supply curves of effort turn backward at some point in all societies. The question is only at what level of income the turn comes, and what it takes to "unbend" the curves.

As Ralph Linton puts it,[93]

> . . . there are two factors effecting economic growth; all societies and most individuals welcome improvement in their economic condition, as long as such improvements do not involve more trouble than they are worth, that is, neces-

[90] J. L. Sadie, "The Social Anthropology of Economic Underdevelopment," in Novack and Lekachman, *op. cit.*, pp. 218–19.
[91] *Ibid.*
[92] Chapter 12, p. 237.
[93] Linton, *op. cit.*, p. 193.

sitate too many changes in established behavior patterns and controvert too many accepted values. . . . Where a society no longer tries to improve economic conditions, this attitude can be traced to a series of past failures and frustrations . . .

Where the supply curves of effort turn backward at a level of living as low as that of the Bantus, the question might well be raised as to whether or not they are really "underdeveloped." Can a society that has everything it wants be regarded as underdeveloped? The question is perhaps more relevant if applied to somewhat higher civilizations—Bali, for example—a civilization in which people meet their basic needs for food, clothing, and shelter on the basis of some twenty hours of work a week, leaving them free to devote the rest of their time to their highly refined arts, their social life, their philosophy, and their religion—might be regarded as the pinnacle of development. The question is, of course, whether such traditional cultures, even when so dynamic within their own framework as the Balinese, can be preserved in the face of population pressure without technological progress and structural change. If the outside observer has *clear proof* that the existing culture, no matter how satisfactory to its adherents, will break down because productivity is not rising as fast as population, then the outsider may be morally obliged to recommend the drastic change in the cultural system that Dr. Sadie feels is necessary. In the absence of such a gloomy prognosis, why not leave satisfied people alone? There are more than enough dissatisfied people to keep social scientists busy.

Another point that should perhaps be made is that when we speak of changing the "culture" we do not mean abandoning those refinements of sensate culture that we so much admire in some of the older civilizations, such as the Balinese. Some increase in the working week may indeed be required; but the painting, the sculpture, the music, and the dance need not be abandoned as industrialization proceeds under the leadership of the Balinese sultans. More people love Bach, medieval painting, and architecture today than before the Industrial Revolution in Europe.

To conclude this section, let us quote the Minutes of the UNESCO Round-Table Conference on Social Prerequisites of Industrialization: [94] "There are no social prerequisites that must be fulfilled *first* in order that economic development may take place *afterward*."

Economic Development Without Cultural Change

One more piece of evidence is of importance here—James Abegglen's conclusion that the industrialization of Japan took place essentially within the framework of feudal society. The industrialization of Japan, Abegglen argues, took place through the transfer of the feudal system from farm to factory. The discipline entailed in the feudal system was used as the very vehicle of industrialization: [95]

[94] Raymond Firth, *General Working Paper,* UNESCO Expert Working Group on Social Prerequisites to Economic Growth, UNESCO/SS/SP/WP 22 March 1963.

[95] James Abegglen, *op. cit.*, pp. 129, 131, 134.

If a single conclusion were to be drawn from this study it would be that the development of industrial Japan has taken place with much less change from the kinds of social organization and social relations of preindustrial or non-industrial Japan than would be expected from the Western model of the growth of an industrial society. . . . At repeated points in the study of the factory, parallels to an essentially feudal system of organization may be seen—not, to be sure, a replication of the feudal loyalties, commitments, rewards, and methods of leadership but a rephrasing of them in the setting of modern industry. . . . It would seem from this study, then, that the very success of the Japanese experience with industrialization may well have been a function of the fact that, far from undergoing a total revolution in social structure or social relationships, the hard core of Japan's system of social relationships remained intact, allowing an orderly transition to industrialization continuous with her earlier social forms.

Here the argument seems to be that profound cultural change is not always necessary in order to achieve technological change and economic development.

Conclusions

If we add up the evidence provided by the "non-economists," we seem to arrive at the following set of conclusions:

1. Virtually any society or culture is capable of economic development. The problem is to recognize within the culture those dynamic elements that contribute most to rising productivity and incomes. Efforts to force all societies into the same mold are likely to retard rather than accelerate economic growth in developing countries as a group. (Geertz, Belshaw, Moore.)

2. It is not even certain that drastic cultural change is always necessary for the combination of capital accumulation, technological progress, structural change, and acquisition of skills that are the essence of economic development. In at least one important case—the grandest success story of them all, Japan—industrialization seems to have taken place by utilizing the existing institutions and value systems of feudalism. (Abegglen.)

3. Where, however, cultural stability is incompatible with rapid economic growth, the culture will adapt readily and painlessly enough to an economic "big push," particularly if the big push includes, as it should, a maximum effort on the educational front. It is, of course, useful to understand the culture in order to accelerate and ease the transition, but rapid and complete cultural change is likely to be less traumatic than gradual and partial change. (Mead, Belshaw.)

Thus we end up with a "big push" doctrine in the socio-cultural field as well as in the economic field.[96] There is nothing we know *for certain* that would suggest to us that a "big push," including massive efforts at education and re-education, will fail, or that it will be particularly painful to a society. On the other hand, there is a good deal of evidence that gradualism will fail, and that it will be very painful indeed in a great many

[96] For more on the economic aspects of the "big-push doctrine," see Chap. 15.

developing countries. On the evidence we have, we have no choice but to recommend a "big push" on all fronts.

All this does not mean that economists should stop studying anthropology, sociology, psychology, and political science. Clearly the maximum domestic effort, absorptive capacity, and the scale of the necessary "big push" are all affected by socio-cultural factors. The chances of success will vary considerably from one society to another, and the chances of success within any one country will be greater if the planners and politicians understand and heed the society and culture with which they are working. The determination of priorities, and the pattern of incentives offered, the decision-making groups to which alternatives are posed and the way in which they are posed, all these should be influenced by the nature of the society. There should be sociologists, anthropologists, and psychologists on the planning team. It does mean, however, that development economists should fight tooth and nail any line of argument that might result in a reversion to gradualism as a basis for development policy.

The difficult cases, of course, will be the countries at so low a level of economic and social development that the maximum domestic effort and total absorptive capacity are both below the "big push" or minimum effort needed to guarantee a rate of growth of income higher than the rate of population growth. Here technical assistance and education will be the major requirements, and the supply of properly trained teachers may be the ultimate bottleneck. Perhaps the whole debate about socio-cultural "obstacles" to economic development really boils down to that; education in its broad sense is an essential component of the development process, and some countries may not be able to mount the necessary "big push" in the field of education without a good deal of outside help.